

Date: Wednesday, 12/13/2006 2:41:50 PM
 User: Kim Johnston

Process Sheet

| | | | |
|-----------------------|---|------------------|-----------------|
| Customer | : CU-DAR001 Dart Helicopters Services | Drawing Name | : TUBE ASSEMBLY |
| Job Number | : 29924 | | |
| Estimate Number | : 10429 | | |
| P.O. Number | : N/A | Part Number | : D3304043 |
| This Issue | : 12/13/2006 S.O. No. : N/A | Drawing Number | : D3304 REV. B |
| Prsht Rev. | : NC | Project Number | : N/A |
| First Issue | : N/A Type : MACHINED PARTS | Drawing Revision | : B |
| Previous Run | : 26693 | Material | : N/A |
| Written By | : | Due Date | : 1/15/2007 |
| Checked & Approved By | : | Qty: | 4 Um: Each |
| Comment | : Est: D 04.11.26 Revised Step 7 KJ/JLM | | |

Additional Product

Job Number:



| | | |
|---------|-----------------------|---------------|
| Seq. #: | Machine Or Operation: | Description : |
|---------|-----------------------|---------------|

| | | |
|-----|----------------|-----------|
| 1.0 | M304TR0875W065 | SS TUBING |
|-----|----------------|-----------|



Comment: Qty.: 1.9469 f(s)/Unit Total : 7.7876 f(s)

Material: AISI 304/316 SS tubing 0.875" x 0.065" wall

(M304TR0.875W.065)

Batch: M103090

BG 07-01-16

4

| | | |
|-----|----------|--------------------------|
| 2.0 | HARDINGE | HARDINGE CNC LATHE SMALL |
|-----|----------|--------------------------|



Comment: HARDINGE CNC LATHE SMALL

1- Cut blank: 22.00" as per Dwg D3304

2- Turn as per Folio FA458 and Dwg D3304

3- Deburr

BG 07-01-16

4

| | | |
|-----|-----|--|
| 3.0 | QC2 | INSPECT PARTS AS THEY COME OFF MACHINE |
|-----|-----|--|



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

BG 07-01-16

4

| | | |
|-----|-----|--------------|
| 4.0 | QC8 | SECOND CHECK |
|-----|-----|--------------|



Comment: SECOND CHECK

ML 07/01/16

4

| | | |
|-----|-------------|-------------------------------|
| 5.0 | SMALL FAB 1 | SMALL & MEDIUM FAB RESOURCE 1 |
|-----|-------------|-------------------------------|



Comment: SMALL & MEDIUM FAB RESOURCE 1

1- Form as per Dwg D3304

Ensure that bend radius does not fall into straight section using DT8756.

2- Drill as per Dwg D3304 using drill Jig D3304-T1

3- Cut tube to length as per Dwg D3304

4- Deburr

FF 07-01-22

4

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

NOTE: Date & initial all entries

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Drawing Name: TUBE ASSEMBLY

Job Number: 29924

Part Number: D3304043

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

M 07/01/29 (4)

7.0

D33047

Bracket



Comment: Qty.: 1.0000 Each(s)/Unit Total : 4.0000 Each(s)

Bracket

Pick:

Qty Part Number Description Batch
1 D3304-7 Bracket

B25067

FC 07/03/20 (4)

8.0

LARGE FAB 1

LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

Weld bracket as per Dwg D3304 and QSI 004 using DT8775

FC 07/03/20 (4)

9.0

QC9

VISUAL WELDING INSPECTION



Comment: VISUAL WELDING INSPECTION

M 07/03/20 (4)

10.0

POWDER COATING

POWDER COATING



M101601



(4x)

Comment: POWDER COATING

Powder Coat Grey Sandtex (Ref: 4.3.5.6) as per QSI 005 4.3

M-L 07/03/22

11.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT

M 07/03/22 x24

12.0

BLBS0016

PIP PIN



Comment: Qty.: 1.0000 Each(s)/Unit Total : 4.0000 Each(s)

PIP PIN

Pick:

Qty Part Number Description Batch
1 BLBS-0016 Pip Pin

M16188XY

✓

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes ☒ No ☐ DQA: Le Date: 09/03/20
 QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| | | | | | | | | |
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| | | | | | | | | |

NOTE: Date & initial all entries

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Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: TUBE ASSEMBLY

Job Number: 29924

Part Number: D3304043

Job Number:



Seq. #:

Machine Or Operation:

Description :

13.0

CBL460

Loop Sleeve



Comment: Qty.: 2.0000 Each(s)/Unit Total : 8.0000 Each(s)

Loop Sleeve

Pick:

| Qty | Part Number | Description | Batch |
|-----|-------------|-------------|---------|
| 2 | CBL-460 | Loop Sleeve | M100644 |

✓

14.0

CBL1240

Cable



Comment: Qty.: 1.0416 f(s)/Unit Total : 4.1664 f(s)

Cable

Pick:

| Qty | Part Number | Description | Batch |
|-------|-------------|-------------|---------|
| 12.5" | CBL-1240 | Cable | M102439 |

ml 07/03/26

✓

15.0

SMALL FAB 1

SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1

Assemble lanyard and pip pin as per Dwg D3304

Identify as D3304-043

ml 07/03/26 x4

16.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

ml 07/03/26 (4)

17.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify with P/N and B/N as per Dwg using a permanent fine point marker, then Stock

Location: _____

07/3/27 (4)

18.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

07/03/28

Job Completion



U 07-03-28

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

NOTE: Date & initial all entries

DART

DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA



D3304-041/-043/-044 NOTES:

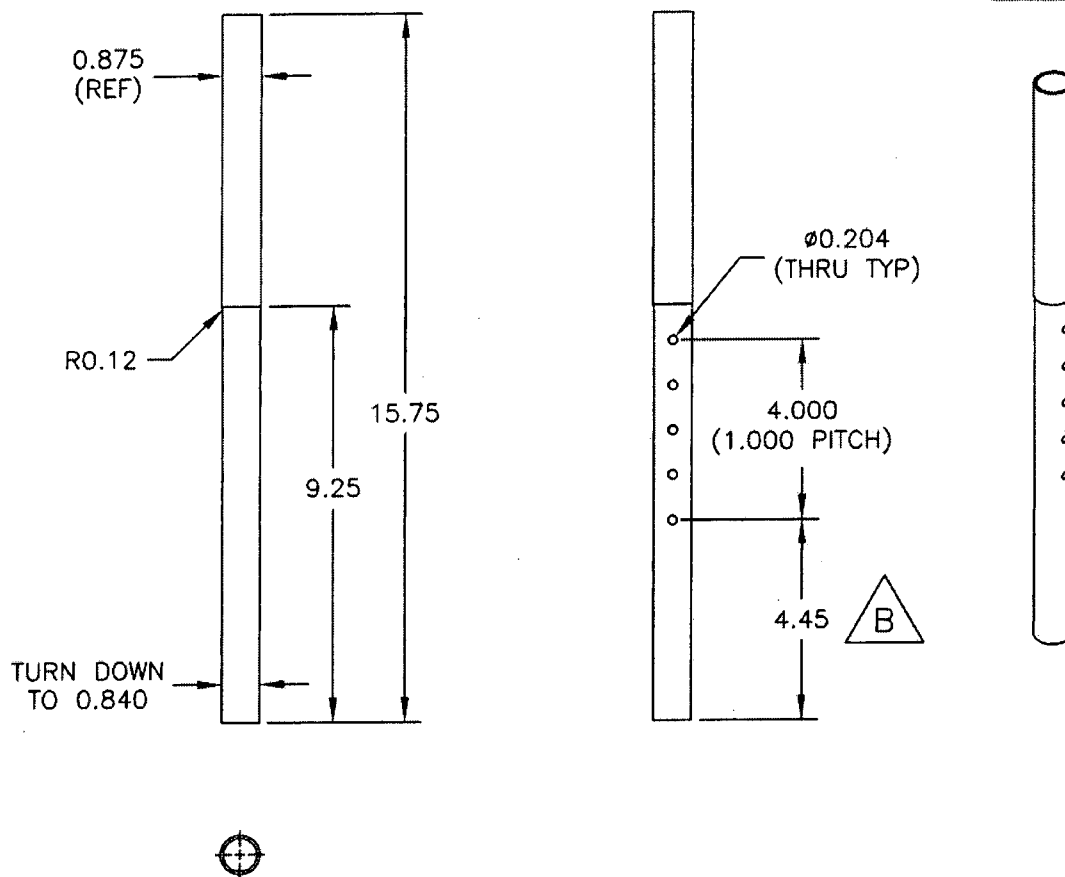
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| DATE 05.07.15 | | TITLE TUBE ASSEMBLY | SCALE 1:4 |

RELEASED
05.08.11 *[Signature]*



D3304-1 TUBE

D3304-1 NOTES:

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL TUBE $\phi 0.875 \times 0.065$ WALL (REF. DART SPEC M304TR0.875W.065) ENSURE SEAMLESS TUBE IS USED
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015

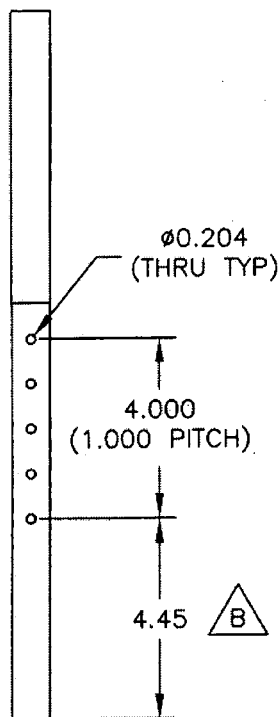
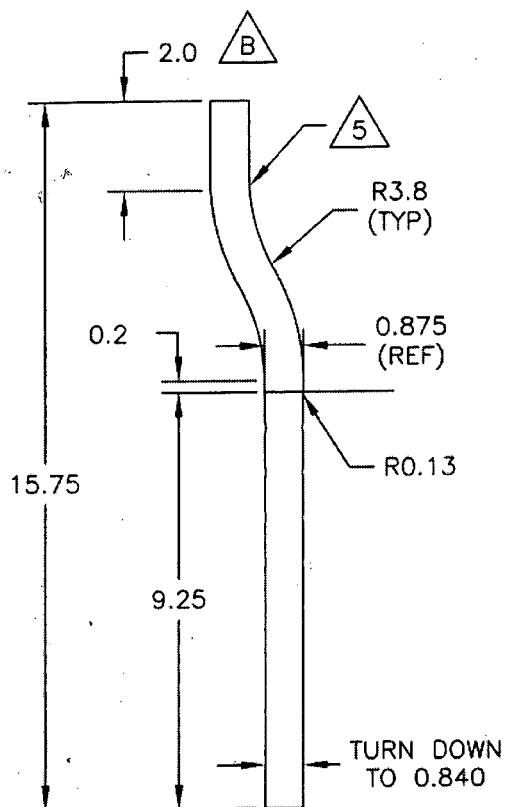
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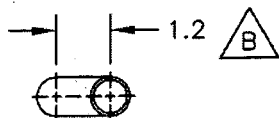
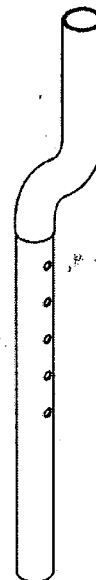
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| DATE 05.07.15 | | TITLE TUBE ASSEMBLY | SCALE 1:4 |



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05.08.11 *[Signature]*



D3304-3 TUBE

D3304-3 NOTES:

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL TUBE $\phi 0.875 \times 0.065$ WALL (REF. DART SPEC M304TR0.875W.065) ENSURE SEAMLESS TUBE IS USED
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 5) BEND LINES 9.625, 13.375 DIMENSIONS

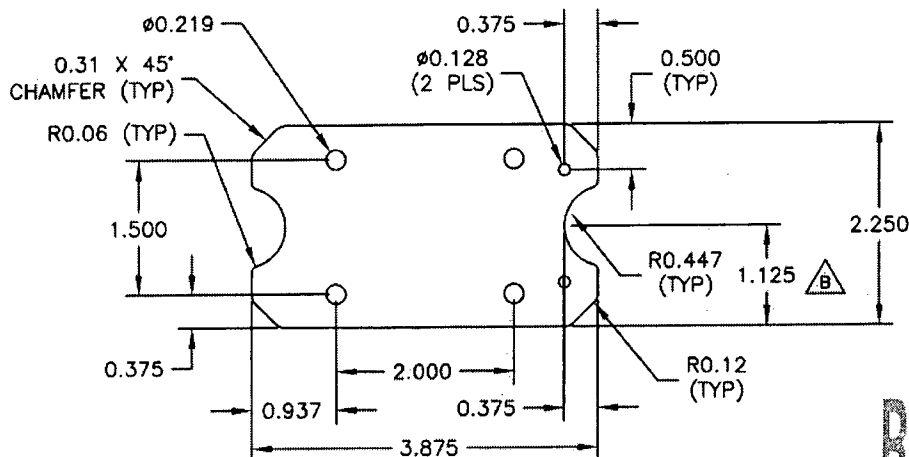
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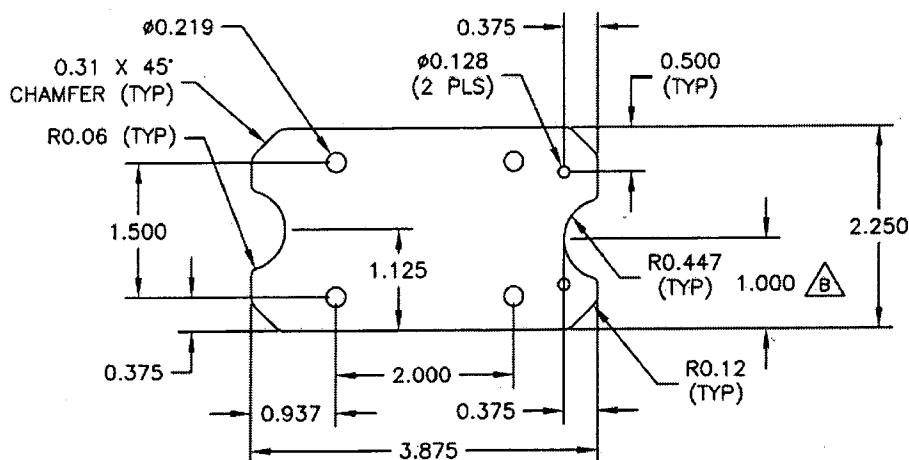


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| DATE 05.07.15 | TITLE TUBE ASSEMBLY | | SCALE 1:2 |

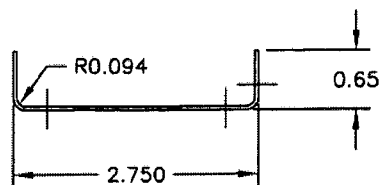


D3304-5 FLAT PATTERN

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D3304-7/-8 FLAT PATTERN



**D3304-5/-7 BRACKET
D3304-8 OPPOSITE**

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NOTES:

- 1) MATERIAL: AISI 304/316 SS 0.040 THICK SHEET (REF. DART SPEC M304S20GA)
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015

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